

Microsoft

Exchange

Server-2013

Course Presentation





Microsoft Exchange Server-2013

Mapped Course

Course Presentation



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MICROSOFT EXCHANGE SERVER 2013

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INTRODUCTION

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What is Exchange Server?



- It is an Application from Microsoft to provide Email communication.
- It is used not only for emails, but also used for document sharing, voice and mobile communications.
- It works as a Client/Server Model.

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Versions of Exchange Server



- Exchange 4.0 Exchange 5.0 Exchange 5.5
 - Windows NT Domain
- Exchange 2000
 - Windows Server 2000 Family
- Exchange 2003
 - Windows Server 2000 Family
 - Windows Server 2003 Family
- Exchange 2007
 - Windows Server 2003 Family
 - Windows Server 2008 Family
- Exchange 2010
 - Windows Server 2008 Family
 - Windows Server 2008 R2 Family
- Exchange 2013
 - Windows Server 2008 R2 Family
 - Windows Server 2012 Family

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- **Standard Edition**
 - Meant for small size organization.
 - Supports 5 Databases
 - Storage limit 50 GB
- **Enterprise Edition**
 - Meant for medium and large size organization.
 - Supports 50 Databases
 - No Storage limit

Hardware Requirements

Component	Requirement
Processor	Minimum: 1.6 GHz (64 bits) or Faster
Memory	Minimum: 8 GB RAM Recommended: 8 GB RAM plus 10 MB of RAM per Mailbox
Available Disk Space	Minimum: 1.2 GB free disk space on the drive where you install Exchange Server 200 MB free disk space on the system drive
Drive	DVD-ROM Drive

Software Requirements



- **Windows Server 2008 R2 Server Family: Standard Edition, Enterprise Edition, Data Center Server with Service Pack 1.**

(OR)

- **Windows Server 2012 Server Family : Standard Edition or Data Center Server.**

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Services Required



- **Services required in Network:**
 - **Active Directory Domain Services & DNS.**
- **Services required in Exchange System:**
 - **IIS (Web Server) along with following Sub components.**
 - **ASP.NET**
 - **Basic Authentication**
 - **Windows Authentication**
 - **Digest Authentication**
 - **Dynamic Content Compression**
 - **IIS 6 Management Compatibility**

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Services Required



- **Additional Components required in Exchange System:**
 - Microsoft .NET Framework 4.5
 - Microsoft Unified Communications Managed API 4.0
 - Windows Power Shell

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Features of Exchange Server 2013



- **Integrated with Active Directory Domains & Services.**
- **Integrated with Internet Information Services.**
- **Exchange Server Roles.**

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Server Roles



- The Exchange Server performs the following Roles :
 - Mailbox Server Role
 - Client Access Server Role

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Mailbox Server Role



- Server hosts the mailbox of users.
- Delivers the mail to the Recipient Mailbox.
- Provides Unified Messaging services.
- Controls all mail routing and flow.
- Applies transport rules and policies.

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Mailbox Server role features enhancements



- Hosting for mailbox databases
- Hosting for public folders
- Transport and message routing services
- Hub Transport service
- Mailbox Transport services
- Unified Messaging service
- High-availability services

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Client Access Server Role



- Interface between the user and the mailbox.
- Provides POP3, IMAP and SMTP services.

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Recipients



- **Mailbox Enabled User**
 - A User Account in Active Directory with mailbox and email address in Exchange Server.
- **Mail Enabled User or Mail User**
 - A User Account in Active Directory with external e-mail address but without a mailbox in Exchange Server.
- **Distribution Group**
 - A Group with e-mail address, used for distributing e-mails to its members.
- **Mail Contact**
 - A Contact in Active Directory with external email address.

Exchange Admin Center (EAC)

- It's a web-based management console in Microsoft Exchange Server 2013 which is improved for on-premises and hybrid Exchange deployments.
- The EAC replaces the Exchange Management Console (EMC) and the Exchange Control Panel (ECP), which were the two interfaces used to manage Exchange Server 2010.

Protocols Used in Exchange

Protocol	Port No.	Usage
HTTP (Hyper Text Transfer Protocol)	80	Browsing and Accessing web pages
HTTPS (Hyper Text Transfer Protocol Secure)	443	Secure HTTP
SMTP (Simple Mail Transfer Protocol)	25	Used for email delivery
POP3 (Post Office Protocol)	110	Used for Downloading Mails
IMAP (Internet Mail Access Protocol)	143	Used for Receiving Mails

- Outlook Web App
- Microsoft Office Outlook

USER PROPERTIES

Mailbox Permissions of Exchange



- **E-mail Addresses**
 - It is used to add multiple e-mail addresses to the same user or to edit the existing e-mail addresses.
- **Mailbox Usage**
 - It is used to define the mailbox size limits of an user and how long to store the deleted items.

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Mailbox Features



- **Forwarding Address**
 - Used to forward the incoming messages of this user to another user.
- **Recipient Limits**
 - Used to specify the number of users a single mail can be delivered by this user.

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Mail Flow



- **Message Size Restrictions**
 - Used to define the Sending and Receiving Message size limits.
- **Message Delivery Restrictions**
 - Used to define the users from whom the messages are accepted and from whom the messages can be rejected.

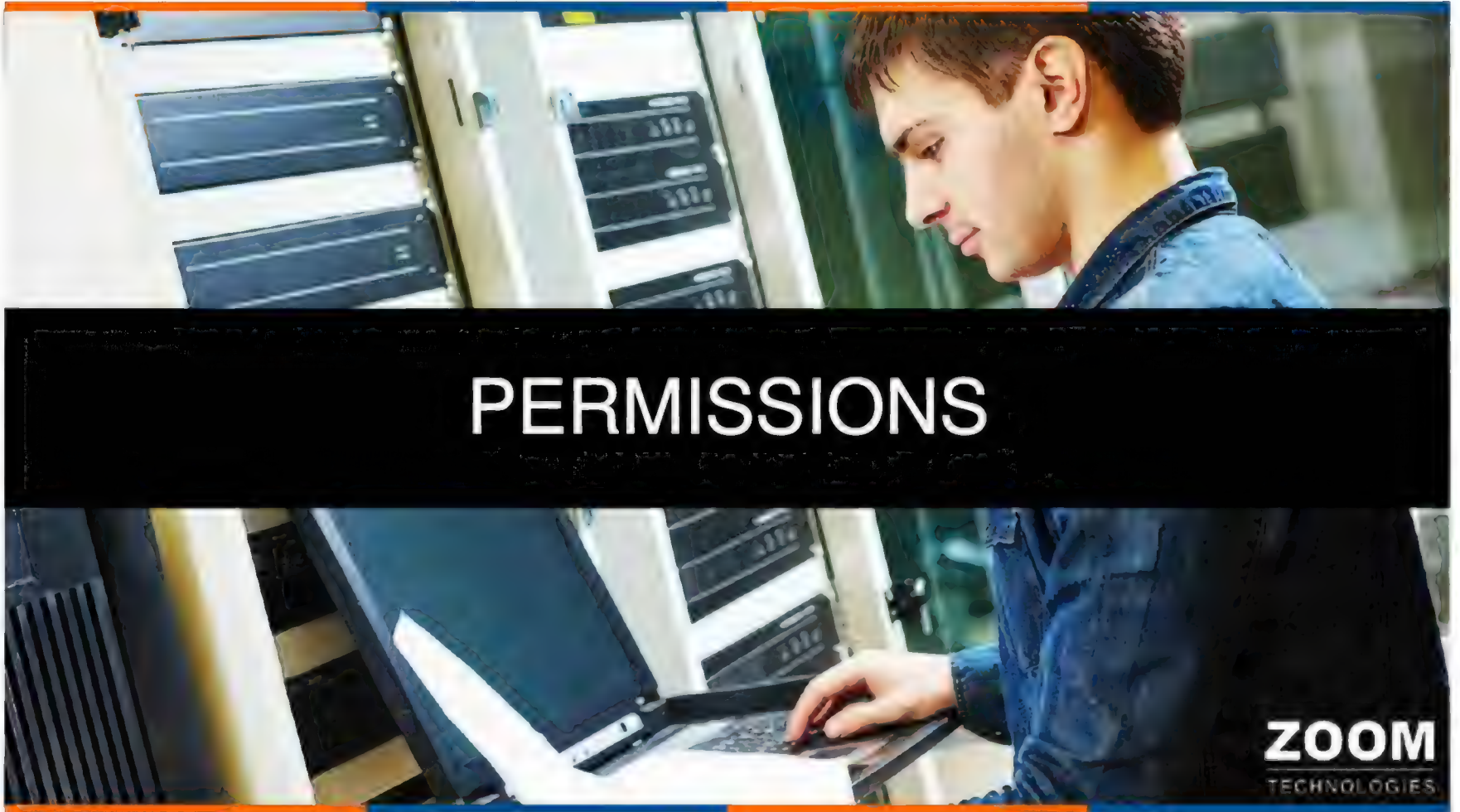
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Mailbox Delegation



- **Send As**
 - Used to allow delegates to use the mailbox to send messages.
- **Send on Behalf**
 - Used to grant send on behalf permission of this user to another user.
- **Mailbox Full Access**
 - Used to grant full mailbox access of this user to another user.

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Role Based Access Control (RBAC)

- The permissions that you grant to administrators and users are based on management roles.
- A role defines the set of tasks that an administrator or user can perform.

Role Based Access Control (RBAC)



- There are two types of roles, Administrative roles and End-user roles:
- **Administrative Roles :**
 - These roles contain permissions that can be assigned to administrators or specialist users using role groups that manage a part of the Exchange organization, such as recipients, servers, or databases.
- **End-User Roles :**
 - These roles, assigned using role assignment policies, enable users to manage aspects of their own mailbox and distribution groups that they own.

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Role Groups and Role Assignment Policies



- Exchange 2013 provides you with the following :
- **Role Groups :**
 - Role groups enable you to grant permissions to administrators and specialist users.
- **Role Assignment Policies :**
 - Role assignment policies enable you to grant permissions to end users to change settings on their own mailbox or distribution groups that they own.

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Outlook Web App Mailbox Policies



- It is used to create organization-level policies to manage access to features in Outlook Web App.
- After applying Outlook Web App mailbox policy to a mailbox, it will override the settings of the virtual directory.
- Only one Outlook Web App mailbox policy can be applied to a mailbox.



- In Microsoft Exchange Server 2013, mail flow occurs through the transport pipeline.
- The transport pipeline is a collection of services, connections, components, and queues that work together to route all messages to the categorizer in the Transport service on a Mailbox server inside the organization.

- The transport pipeline consists of the following services:
 - Front End Transport Service
 - The Front End Transport service only communicates with the Transport service on a Mailbox server and doesn't queue any messages locally.
 - Transport Service
 - The Transport service handles all SMTP mail flow for the organization, performs message categorization, and performs message content inspection.
 - The Transport service routes messages between the Mailbox Transport service and the Front End Transport service.

Rules (Transport Rules)



- Preventing inappropriate content from entering or leaving the organization.
- Filtering confidential organization information.
- Tracking or archiving copying messages that are sent to or received from specific individuals.
- Redirecting inbound and outbound messages for inspection before delivery.
- Applying disclaimers to messages as they pass through the organization.

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Delivery Reports



- It is used to track delivery information about messages sent by or received from any specific mailbox in exchange organization.
- It can search for messages sent by the mailbox, or sent to the mailbox, and it can filter the search results by the message subject.

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Accepted Domains



- **Accepted Domains:**
 - Accepted domains is an SMTP namespace that the Exchange organization can send and receive email for.
- **Authoritative:**
 - Email is delivered to a recipient in this Exchange organization.
- **Internal Relay:**
 - Email is delivered to a recipient in this Exchange organization or relayed to an email server outside this organization.
- **External Relay:**
 - Email is relayed to an email server outside this Exchange organization.

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Email Address Policies



- Email address policies automate the process of assigning email addresses to recipients.
- Email address policies define the format for the e-mail address.

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Connectors



- It is used to control inbound and outbound mail flow in Exchange organization.
- It will route mail to and receive mail from recipients outside the organization.
- Send Connectors:
 - It controls the flow of outbound messages to the receiving server.
- Receive Connectors:
 - It controls the flow of inbound messages to the Exchange organization.

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Queue Viewer



- A queue is a temporary holding location for messages that are waiting to enter the next stage of processing or delivery to a destination.
- It is used to check the mail stuck in the queue before delivery.

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Database



- **Mailbox Database:**
 - It is the location which contains mailboxes and the recipient's information.
 - It stores the information in Exchange Database format (.edb).

Database



- Mailbox Database
 - User Mailbox
 - User Emails
 - Private Mails
 - Public Folder Mailbox
 - Public Folders
 - Public Emails

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Database



- In Exchange Server 2013, each Mailbox Database shares a single set of logs.
- Each Exchange Server 2013 Standard system can handle a maximum of 5 databases per Server.
- Total number of databases on a server cannot exceed 5.

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Archive Mailbox



- It provides users with an alternate storage location in which to store historical messaging data.
- It is an additional mailbox for a mailbox enabled user.
- Users can move or copy messages between their primary mailbox and the archive mailbox.
- It presents a consistent view of messaging data to users and eliminates the user overhead required to manage .pst files.

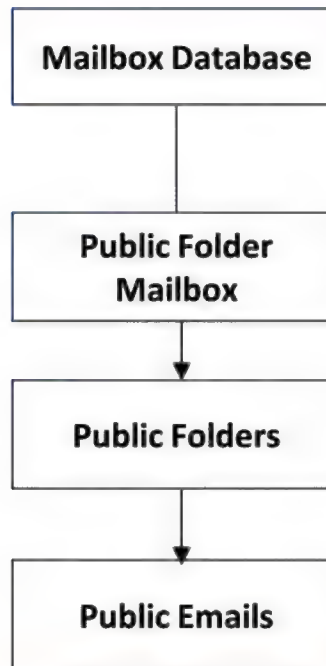
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Public Folders



- It provides the centralized storage about any type of data that is meant to be accessed by multiple users in an organization.
- It is designed for shared access and provide an easy and effective way to collect, organize, and share information with other people in organization.
- It can also be used for storage of documents, administrative messages and other applications.

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- **Malware Filter protection feature helps combat malware in email messaging environment.**
- **Malware is comprised of viruses and spyware.**
- **Viruses infect other programs and data, and they spread throughout the computer looking for programs to infect.**
- **Spyware refers to malware that gathers user's personal information, such as sign-in information and personal data and sends it back to its author.**



Client Side Backup & Recovery



- **Outlook Web App:**
 - It does not support client side backup & recovery of emails.
- **Microsoft Office Outlook:**
 - It supports client side backup & recovery of emails.

- **Database Availability Group (DAG):**
 - A DAG is a group of up to 16 Mailbox Servers that provides the structure for replicating and activating database copies.
 - A DAG is a boundary for mailbox database replications.

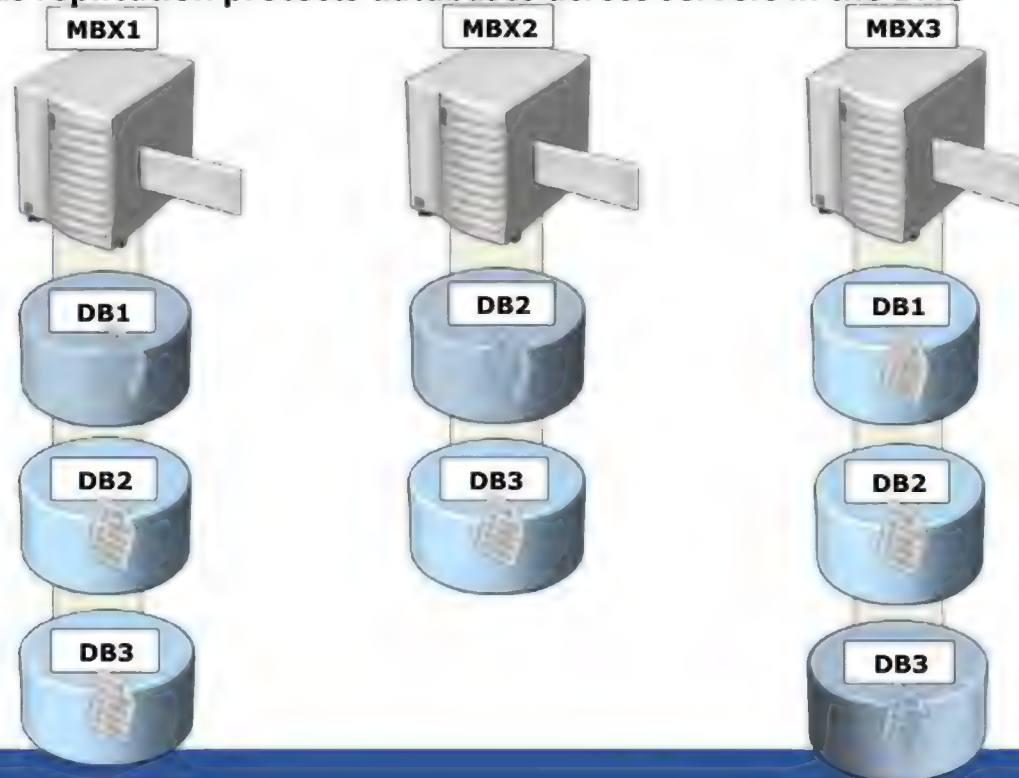
- **Recommendations:**
 - **Witness Server** – It is used to store witness information.
 - **Witness Directory** – It is used on the witness server to store witness information.
 - **DAG IP addresses** – IP addresses used by DAG.
 - **Windows Server 2012 Datacenter, or Windows Server 2008 R2 Datacenter or Enterprise Editions.**

Database Availability Group (DAG)

- **Active Manager:**
 - It is used to control the failover of Databases.
 - It has two roles PAM & SAM.
 - **Primary Active Manager (PAM)**
 - It will decide which database copies will be active and passive.
 - **Standby Active Manager (SAM)**
 - It detects the failures of databases and the local Information Store.

Database Availability Group (DAG)

- Continuous replication protects databases across servers in the DAG



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